

Short HW 1

Kate Little

2024-08-28

Load Packages

Note: you may need to install some of these packages if you do not already have them installed.

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2     3.5.0      v tibble    3.2.1
## v lubridate  1.9.3      v tidyr     1.3.1
## v purrr       1.0.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(haven)
# install.packages("sjPlot")
library(sjPlot)
# install.packages("vtable")
library(vtable)
```

```
## Loading required package: kableExtra
##
## Attaching package: 'kableExtra'
##
## The following object is masked from 'package:dplyr':
##
##     group_rows
```

Load Data

```
auto <- read.csv(file = "Auto.csv")
```

Question 1

What is the mean of the mpg variable?

```
mean(auto$mpg)
```

```
## [1] 23.44592
```

The mean mpg is: [23.45 miles per gallon]

Question 2

What is the correlation between horsepower and mpg?

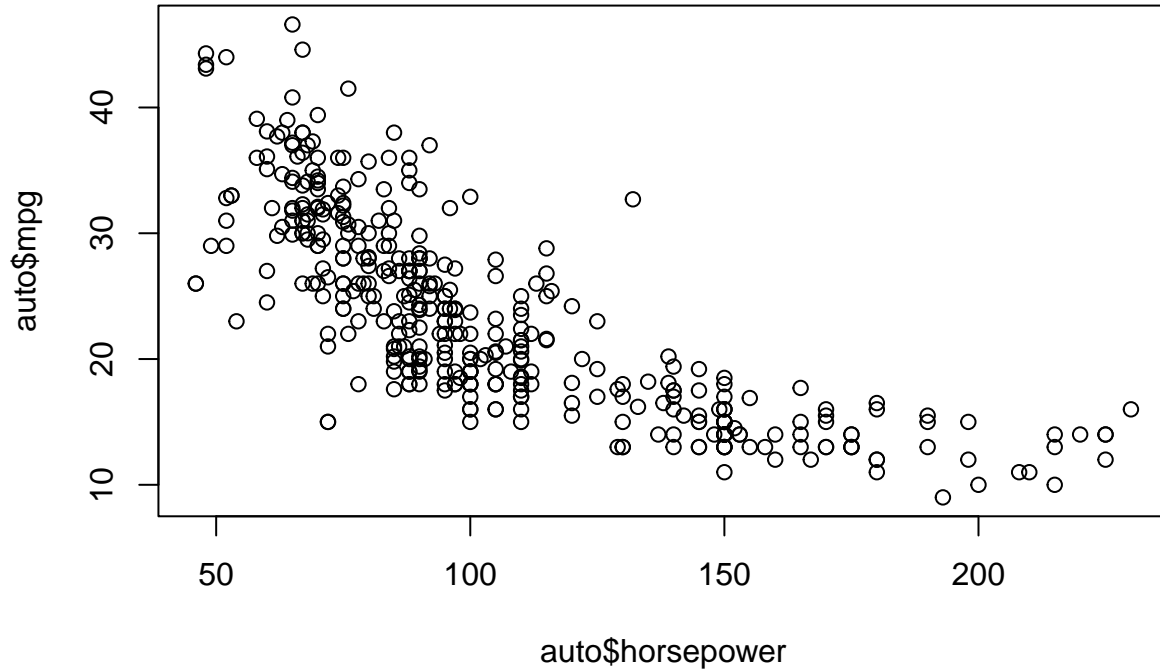
```
cor(auto$horsepower, auto$mpg)
```

```
## [1] -0.7784268
```

The correlation between horsepower and mpg is: [-0.778]

Here is a scatterplot of the two variables:

```
plot(x=auto$horsepower, y=auto$mpg)
```



Session Info

```
sessionInfo()
```

```
## R version 4.2.3 (2023-03-15 ucrt)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 19045)
##
## Matrix products: default
##
## locale:
```

```

## [1] LC_COLLATE=English_United States.utf8
## [2] LC_CTYPE=English_United States.utf8
## [3] LC_MONETARY=English_United States.utf8
## [4] LC_NUMERIC=C
## [5] LC_TIME=English_United States.utf8
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods   base
##
## other attached packages:
## [1] vtable_1.4.6      kableExtra_1.4.0  sjPlot_2.8.16     haven_2.5.4
## [5] lubridate_1.9.3   forcats_1.0.0     stringr_1.5.1     dplyr_1.1.4
## [9] purrr_1.0.2       readr_2.1.5       tidyr_1.3.1       tibble_3.2.1
## [13] ggplot2_3.5.0     tidyverse_2.0.0
##
## loaded via a namespace (and not attached):
## [1] tidyselect_1.2.0   sjlabelled_1.2.0   xfun_0.42          performance_0.12.2
## [5] colorspace_2.1-0   vctrs_0.6.5        generics_0.1.3     htmltools_0.5.7
## [9] viridisLite_0.4.2  yaml_2.3.8         utf8_1.2.4         rlang_1.1.3
## [13] pillar_1.9.0       glue_1.7.0         withr_3.0.0        lifecycle_1.0.4
## [17] sjmisc_2.8.10      munsell_0.5.0      gtable_0.3.4       evaluate_0.23
## [21] knitr_1.45         tzdb_0.4.0         fastmap_1.1.1      datawizard_0.12.2
## [25] fansi_1.0.6        highr_0.10         scales_1.3.0       ggeffects_1.7.0
## [29] systemfonts_1.0.5  hms_1.1.3          digest_0.6.34      stringi_1.8.3
## [33] insight_0.20.3     grid_4.2.3         cli_3.6.2          tools_4.2.3
## [37] sjstats_0.19.0     magrittr_2.0.3     pkgconfig_2.0.3    xml2_1.3.6
## [41] timechange_0.3.0   rmarkdown_2.25     svglite_2.1.3      rstudioapi_0.15.0
## [45] R6_2.5.1           compiler_4.2.3

```